



**CALIFORNIA
HIGH-SPEED RAIL
AUTHORITY**

BRIEFING: May 4, 2011 OPERATIONS COMMITTEE AGENDA ITEM #3

TO: Operations Committee and Board Members

FROM: Roelof van Ark, CEO

DATE: April 27, 2011

RE: Central Valley to Los Angeles Basin Mountain Crossing

Proposal to Reintroduce Study of an I-5 (Grapevine) alignment alternative between Bakersfield and Sylmar

Summary

During the Program EIR/EIS process, an I-5 (Grapevine) alignment was considered but dropped due to perceived high capital cost(s), seismic challenges and environmental issues. The SR-58/Soledad Canyon alignment via Palmdale was selected for further study at the Project level. After further study, the SR-58/Soledad Canyon alignment alternatives require substantially greater tunnel lengths at higher cost than envisioned at Program level, and also have greater environmental (protected and endangered species) and residential impacts than anticipated at the program level. Potential capital cost increases for the two HST alignment alternatives being carried forward between Palmdale and Sylmar, and their impact on growth and development, have resulted in the staff recommendation to do a conceptual study of the I-5 (Grapevine) as a potential alternative for the project level EIR/EIS processes.

Program and Project Level EIR/EIS Analysis

Program Level EIR/EIS:

The CHSTP Program studies examined alignment opportunities between Bakersfield and Sylmar that included alignments along Interstate I-5 (Grapevine) and through the Antelope Valley, generally following the SR-58/Soledad Canyon. The Final Program EIR/EIS, Section 6A.4.1, concluded that the alignment through the SR-58/Soledad Canyon Corridor (Antelope Valley) with an HST station at Palmdale is the preferred option for crossing the Tehachapi Mountains between the Central Valley and Southern California, on the grounds that, despite the I-5

(Grapevine) alignment option being shorter and approximately 10 minutes faster, the Soledad Canyon alignment would:

- require less tunneling and consequently be an easier to construct, resulting in a less costly option;
- would be less subject to seismic activity;
- would have fewer potential environmental impacts (though greater cultural and biological resource impacts);
- provide connectivity to any future Palmdale Regional Airport redevelopment, should it reopen to commercial passenger flights; and
- in the 1990's and early 2000's, the Antelope Valley region (Palmdale and Lancaster) was experiencing significant development, and the cities of Los Angeles and Palmdale wanted the HST alignment to support that fast growing population with the HST passing through Palmdale/Lancaster, with a station.

Project Level EIR/EIS:

Alignment alternatives were investigated using a computer aided alignment planning tool, allowing thousands of potential alignment options to be studied which generally followed the SR-58/SR14/Soledad Canyon corridor between Bakersfield and Sylmar. The resulting alternatives which best met the Project objectives were evaluated further through the Preliminary Alternatives Analysis reports in 2010.

The Soledad Canyon alignment had the longest route length and journey time, requiring substantially greater tunnel and viaduct lengths at significantly higher cost than originally envisioned at Program level. It had the most impacts to the existing Metrolink rail line, Soledad Canyon Road and Santa Clara River, with most geotechnical constraints, constructability issues, and environmental (protected and endangered species) and residential impacts through the Soledad Canyon area. It took the largest area of Angeles National Forest of any of the alternatives. It was recommended not to be considered further by the USEPA and CA Department of Fish & Game, who wrote to the Authority confirming their belief that the other SR 14 East and West alignments being studied provide a much greater opportunity to find the Least Environmentally Damaging Practicable Alternative through this segment.

At the July 2010 Board Meeting, the Authority Board concluded that the SR 14 East and SR 14 West alignments should be studied further and the Soledad Canyon alignment should not be studied further.

With the Soledad Canyon alignment not deemed viable, with improved topographical data through the mountains and the objective to minimize impact to significant recent residential development through the Santa Clarita and Antelope Valleys, the current alignments being studied between Bakersfield and Sylmar now include significant, long tunnel sections and elevated structures at substantially higher cost than was envisioned at Program stage. A greater understanding of the seismic issues and fault analysis has additionally required 'at-grade' fault crossings in the mountains, with significant viaduct lengths and heights required either side to achieve this. Opportunities for cost reduction on these alignments are being investigated while maintaining project operational objectives, but these appear limited with any significant cost saving likely to only result from shortening the route.

Stakeholder / Community Opinion

Significant objection has been met to existing alignment options south of Palmdale from the communities of Acton, Agua Dulce and Sand Canyon who have raised concerns about potential residential impacts and visual and noise impacts from viaduct / at-grade alignments and to local schools. The City of Santa Clarita has also expressed a perception of impact without benefit, since a Santa Clarita station location is not feasible with the current alignment options.

Conceptual Review of the I-5 (Grapevine) Alignment

There are several reasons to consider undertaking a conceptual study of the I-5 (Grapevine) alignment between Bakersfield and Sylmar, including reevaluation of the main reasons the alignment was not selected for further study at Program level. If a feasible Grapevine alignment alternative can be identified for investigation in the Project EIR/EIS processes, such an alternative could have several benefits, including:

- Could be about 25 miles shorter than an alignment via Palmdale, allowing at least a 7-9 minute travel time saving.
- May result in a significant cost saving (\$ Billions) over an alignment via Palmdale.
- Could allow a HST station location at Santa Clarita, resulting in direct access into the existing San Fernando Valley ROW corridor at the north.
- Might provide a greater opportunity for phased implementation to Southern California, providing faster access to potential HSR users in the Los Angeles (LA) Basin.

Phased Implementation Considerations

Phasing the CHSTP to allow a downtown Los Angeles service offers limited benefit or practicality from Palmdale, because the Metrolink service into downtown LA is cumbersome and slow (1 hr 45 min) going through the Soledad Canyon alignment. The CHSTP could benefit from the Grapevine alignment via Santa Clarita, because it may be possible to connect with Metrolink and other transit at Santa Clarita which is currently about 55 minutes from LA Union Station by Metrolink. Opportunities would then exist to improve the existing rail corridor south to the LA Union Station (30 miles) and to either utilize a faster Metrolink service, or continue HST service into downtown LA, for a considerably less distance than from Palmdale (69 miles).

Staff Recommendation

Approve a conceptual study of the Grapevine corridor between Bakersfield and Sylmar with a potential station at Santa Clarita which would include working with stakeholders (agencies, landowners, tribes, and other interested parties) in this corridor. The purpose of this study would be to determine if a feasible Grapevine alignment alternative could be identified for potential inclusion as part of the Authority's and FRA's project EIR/EIS environmental review processes. If a feasible Grapevine alignment is found, this would be brought back to the board for approval before detailed environmental analysis is conducted.